

# (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2006/0138574 A1 Saito et al.

Jun. 29, 2006

## (43) **Pub. Date:**

## (54) CAPACITIVE SENSOR

(75) Inventors: Junichi Saito, Miyagi-ken (JP); Takuo Ito, Miyagi-ken (JP)

> Correspondence Address: **BEYER WEAVER & THOMAS LLP** P.O. BOX 70250 OAKLAND, CA 94612-0250 (US)

(73) Assignee: ALPS ELECTRIC CO., LTD.

(21) Appl. No.: 11/280,681

(22) Filed: Nov. 15, 2005

(30)Foreign Application Priority Data

## **Publication Classification**

(51) Int. Cl. H01L 29/84 (2006.01)

### (57)**ABSTRACT**

A pressure-sensitive capacitive sensor is provided that can easily remove noises delivered from a human body. The capacitive sensor includes a sensor unit having a first substrate where a plurality of vertical wiring lines is formed and a second substrate where a plurality of horizontal wiring lines is formed, the first and second substrates being disposed in a matrix and facing each other with a gap interposed therebetween, and a capacitance at intersections between the vertical wiring lines and the horizontal wiring lines changed in response to an external pressure; and a detecting unit for detecting the change in capacitance at the intersections between the vertical wiring lines and the horizontal wiring lines, and detecting an externally applied pressure distribution based on the detecting result. In this case, a horizontal wiring line 50 for noise detection is disposed on a surface where the horizontal wiring lines are formed in the second substrate.

